# PDR RID Report

**Date Last Modified** 4/12/95

**Originator**     Omar Spaulding

**Organization**     NASA HQ/Code YD

**E Mail Address** ospaulding@mtpe.hq.nasa.gov

**Document**     Presentation

**Phone No**     202-358-0777

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| **RID ID  PDR**  218 | |
| **Review**   CSMS | |
| **Originator Ref**   OYS-HQ-002 | |
| **Priority** 2 | |

**Section** FOS Networking Support   **Page** DM-6          **Figure Table**

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**Category Name** Design-Segment-level                    **Actionee**    HAIS

**Sub Category**

**Subject**          The need for design detail

**Description of Problem or Suggestion:**

The design as presented discussed two different LANs (operational and supports). It appears that these are two different designs for LAN error detection, recovery, reporting, and configuration because of the topologies chosen (FDDI ring recovery and Ethernet). Because of these approaches it is not clear what benefits are derived in terms of cost and design solutions. At first look the software error detection, configuration and reporting are coded differently, two sets of hardware spare components are maintained, and the design complexity/performance/functionality of servers, routers, hubs are unknown. This uncertainty may incur additional complexity and cost to the program.

**Originator's Recommendation**

Conduct a more detailed end to end study which addresses EOS configurations in terms of cost, performance, training, operation and maintenance with a single FDDI topology and one with both FDDI and Ethernet topology (using FDDI hardware). The results of the study should clarify any design deficiency or cost impacts.

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**GSFC Response by:**                              **GSFC Response Date**

**HAIS Response by:**     Forman                  **HAIS Schedule**     2/28/95

**HAIS R. E.**     D. Moore                        **HAIS Response Date**   3/22/95

Prior to PDR, CSMS conducted a trade evaluation regarding the design and implementation of the EOC LAN.  The evaluation included consideration of impact on M&O, cost, flexibility, evolvability, etc.  The analysis was released with the review documentation prior to PDR.  The analysis will be re-evaluated prior to CDR in order to insure it reflects the latest data available with regards to the FOS design requirements and data flows.

The use of two networks, each with FDDI and Ethernet portions, does not complicate "LAN error detection, recovery, and reporting" because SNMP monitors an interface, so the details of whether the interface is FDDI or Ethernet are hidden from the management application.  Thus, the error detection and reporting software is not coded differently for each type of interface.

Ethernet was chosen for the User Stations because they require relatively low bandwidth and the cost savings of Ethernet were very significant.  Also, some amount of Ethernet hardware is required in any case to connect the FOS printers, which are only available with Ethernet interfaces.

In any event, the analysis will be re-evaluated and refined prior to CDR, and will consider the design's complexity, M&O impact, evolvability, cost, etc.

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**Status**   **Closed**          **Date Closed**  **4/12/95**          **Sponsor**   **desJardins**

****** **Attachment if any** ******

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